

IN THE SPECIFICATION

On page 1, after TITLE OF THE INVENTION, please amend the title from "COOKING UTENSIL" to be "MAINTENANCE OF A COOKING UTENSIL".

On page 4, starting at line 18, please amend as follows:

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"According to a tenth aspect of the present invention, in addition to an advantageous effect of the ninth aspect, there is provided a cooking utensil, wherein, a maintenance item can be displayed through a predetermined operation of a switch provided on the operating panel to rapidly recognize ~~concrete~~ concrete item of maintenance by display of the predetermined sign."

BRIEF DESCRIPTION OF THE DRAWINGS

On page 5, starting at line 14, please amend as follows:

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"FIG. 1 is an ~~illustrative~~ a side elevational view of a fryer;

FIG. 2 is an illustrative view of an operating panel;

FIG. 3A is an illustrative view of an operating panel when a ~~specific~~ special mode selection screen ~~[[1]]~~ 1-1 is displayed;

FIG. 3B is an illustrative view of an operating panel when a ~~specific~~ cooking mode selection a screen 2-1 is displayed;

FIG. 3C is an illustrative view of an operating panel when a ~~specific~~ boil-out mode selection screen 2-2 is displayed;

FIG. 4A is an illustrative view illustrating a display of an operating panel when a maintenance period ~~[[is]]~~ may be set;

FIG. 4B is an illustrative view illustrating a display of an operating panel when a maintenance period frequency is set;

FIG. 4C is an illustrative view illustrating a display of an operating panel when a day of the week of the maintenance period is set;"

DETAILED DESCRIPTION OF THE INVENTION

On page 6, starting at line 16, please amend as follows:

"FIG. 1 is an ~~illustrative view entirely illustrating a~~ side elevational view of a commercial fryer 1 (hereinafter, referred to as "fryer") as an example of a cooking utensil. A fryer ~~[[1]]~~ 30 is provided in a casing ~~[[2]]~~ 32 with a pair of left and right oil vessels ~~[[3]]~~ 33a, 33b filled with cooking oil (hereinafter, referred to as "oil") for frying a food; a pulse burner ~~[[4]]~~ 34 that is a heating means for heating up the oil, provided in each oil vessel ~~[[3]]~~ 33a, 33b; a controller 5 for mainly controlling combustion of the pulse burner ~~[[4]]~~ 34; and an oil tank 6 for temporarily reserving oil in order to filtrate the oil contained in the oil vessels 3, 3.

The pulse burner [[4]] 34 has a combustion chamber 7 formed in the oil vessel [[3]] 33b and a mixing chamber 8 that communicates with the combustion chamber 7 outside of the oil vessel [[3]] 33b. The mixing chamber 8 is connected to a gas pipe 12 for supplying a fuel gas provided with, from the upstream side, an intake solenoid valve 9, a main solenoid valve 10, and a gas governor 11. The mixing chamber 8 is connected to an air supply pipe 13 comprising a fan for supplying combustion air.

Further, the combustion chamber 7 is communicated with a tail pipe 14 extending through the oil vessel [[3]] 33b, and the tail pipe 14 is connected to an exhaust pipe 15, that opens to the outside of the fryer [[1]] 30, via a de-coupler 24 at the outside of the oil vessel [[3]] 33b.

The controller 5 comprises an operating panel 16 at the front of a casing [[2]] 32. FIG. 2 is a front view showing the operating panel 16. At the operating panel 16, there are provided operating switches 17a, 17b; display portions 18a, 18b for displaying the name of a food on the menu, temperature or the like; cooking start switches <1> to <4> located in pairs beneath each display portion [[18]] 18a, 18b (hereinafter, referred to as a "switch <1>" or the like); and left and right feed switches 19a, 19b, for switching a display of the display portion [[18]] 18a, 18b respectively, corresponding to each of the left and right oil vessels [[3]] 33a, 33b and a thermometer

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switch 20 common to both of the oil vessels [[3]] 33a, 33b is provided between the display portions 18a and 18b. Reference numerals 21a, 21b denote combustion lamps, and reference numerals 21a, 21b denote combustion demanding lamps. In addition, the controller 5 comprises a CPU (a central processing unit) for controlling operation of the fryer [[1]] 30; a ROM having a control program stored therein; a RAM storing various types of control data; and an interface for data exchange. This CPU delivers a control command to each portion of the equipment in accordance with a program read out from the ROM, and performs processing according to data output from each portion of the equipment. A temperature sensor 23 provided at the oil vessel [[3]] 33b and a variety of switches provided on the operating panel 16 are connected to the input side of the CPU. Each of the solenoid valves, a fan motor, various types of lamps and the like are connected to the output side of the CPU.

Therefore, in a normal mode, each switch is operated on the operating panel 16, thereby making it possible to implement normal operation control for selecting food, cooking or displaying an oil temperature. For example, when a left operating switch 17a is pressed, the pulse burner 4 operates to implement ON/OFF control for switching combustion and a combustion stop by opening and closing the main solenoid valve 10 based on a signal from the temperature sensor 23, and to

maintain the oil temperature in the oil vessel [[3]] 33a in a predetermined range. Here, on the display portion 18a, a food on the menu (for example, potato or the like) is displayed. By pressing a feed switch 19a, a target food can be selected and displayed. Thereafter, when a switch <1> is pressed after putting a food in the oil vessel [[3]] 33a, the counting of the preset cooking time for the selected food is started. Then, when the cooking time terminates, the switch <1> blinks, and the alarm goes off, indicating that the cooking has terminated.

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On the operating panel 16, apart from use in such a normal mode, use in a special mode is available to enable to set a timer or a temperature used in a normal mode, change of various names or the like. Specifically, the special mode includes: a program mode for setting parameters used for cooking of each food; a setup mode for providing various types of settings such as displayed language setting, sound-level control, or temperature calibration; a maintenance informing mode for verifying what kind of maintenance should be performed and checking up on the completion when a maintenance time is informed in a normal mode; a maintenance time setting mode for setting time to inform maintenance; a cooking time adjustment mode for automatically measuring and adjusting a cooking time; and a boil-out mode for boiling the oil vessel [[3]] 33a, 33b.

During switching to any one of these modes, when the left and right feed switches 19a, 19b, are pressed from three

seconds, a special mode selection screen [[1]] 1-1 is displayed as shown in FIG. 3A. Then, when the right feed switch 19b is pressed, a special mode selection screen 2-1 shown in FIG. 3B or a special mode selection screen 2-2 shown in FIG. 3C is displayed according as the operating switch 17b is turned ON. That is, in a cooking time adjustment mode, a cooking timer is adjusted while actual operation is made. Thus, only in the case where switching to the special mode is established while the operating switch 17b is turned ON, the screen is displayed as shown in FIG. 3B. In a boil-out mode, cold or hot water is poured into the oil vessel [[3]] 30, and is boiled. Thus, only in the case where switching to the special mode is established while the operating switch 17b is turned OFF, the screen is displayed as shown in FIG. 3C in order to prevent the boil-out mode from implementing when there is oil in the vessel [[3]] 33b."

On page 10, starting at line 24, please amend as follows:

"As described previously, a maintenance time setting mode is selected by pressing the switch <2> on the display shown in FIG. 3C. When the switch <1> or <2> is pressed, a message "maintenance (calibration)" is displayed on the left display portion 18a, as shown in FIG. 4A. On the right display portion 18b, there appears a display "Y/N: YES", which prompts a user to select whether or not information is performed when a

maintenance time has come. Therefore, "Y/N: YES" and "Y/N: NO" are sequentially displayed by pressing the switch <4>.

Informing the maintenance time is selected by displaying "YES".

Next, when the switch <3> is pressed, "Cycle:W" is displayed on the right display portion 18_b as shown in FIG. 4(B). When the switch <4> is pressed, "Cycle:W", "Cycle:M", "Cycle:Q", "Cycle:H", and "Cycle:Y" are cyclically displayed in this order (where W denotes one week, M denotes one month; Q denotes three months; H denotes a half year; and Y denotes one year for the cycle). For example, when the switch <3> is pressed after "W" has been displayed, "Day of the week:SUN" is displayed on the right display portion. When the switch <4> is pressed in this state, "MON", "TUE", "WED", "THU", "FRI", "SAT", and "SUN" are cyclically displayed in this order for a day of the week. For example, when "MON" is displayed as shown in FIG. 4C, every Monday is set as a standard date to perform the calibration based on a calendar. In this state, a thermometer switch 20 functions as a switch for storing the information item setting. When the thermometer switch 20 is pressed, the standard date is stored. Otherwise, a standard date can be set for every month, three months, half year, or year by operating the switches <3> and <4> in a similar way to the above procedures. Even after a maintenance time has been set, the setting can be changed arbitrarily by displaying a special mode selection screen similarly.

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After a standard date is thus set by the maintenance time setting means, when the fryer 30 is powered ON on the standard day or later, or when the standard day has come while the fryer 30 is operating, the necessity of maintenance is informed on the operating panel 16. Specifically, as shown in FIG. 5, in a normal mode, an asterisk * blinks as informing means at the end of the left display portion 18. Therefore, in the case where this display appears, any of the special mode selection screens 2-1 and 2-2 is displayed by operating the left and right feed switches 19a, 19b, as described previously. Then, pressing the switch <1> that corresponds to "maintenance display" makes it possible to enter a maintenance informing mode. Each specific item name for which maintenance should be performed is displayed at the display portion 18 together with a cursor. For example, "Calib" for calibration, "Clean" for fryer cleaning, "oil" for oil leakage check or the like is displayed."

On page 13, starting at line 12, please amend as follows:

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"As has been described above, according to the above embodiment, the fryer 30 comprises: maintenance time setting means capable of arbitrarily setting an execution time for each maintenance item; and informing means for informing the execution time set by the maintenance time setting means, thereby enabling maintenance schedule management by the fryer

[[1]] 30 itself, and the information is automatically performed. Therefore, the schedule is precisely managed, and a maintenance can be executed at a proper time informed in accordance with the managed schedule, thereby a maintenance delay or cycle inaccuracy can be prevented. In addition, only one initial maintenance time setting suffices, thus eliminating a worker doing cumbersome work involved in schedule management."

On page 14, starting at line 11, please amend as follows:

"After the execution time has been informed, the corresponding maintenance work is performed, thereby the information marked with the asterisk * is automatically called off. Thus, if a maintenance is not performed, the information is continued, and reliable execution of the maintenance is prompted. In particular, informing means is the display of the asterisk *, and thus, the information can be performed on the display portion [[18]] 18a, 18b without any problem during normal cooking."

On page 14, starting at line 24, please amend as follows:

"After the asterisk * has been displayed, a special mode selection screen is displayed by operating the feed switches 19a, 19b, thereby making it possible to display a specific maintenance item. Thus, even if the information displaying

only the asterisk * occurs, a maintenance item to be executed can be recognized speedily.

In the above embodiment, although the description has been given with the example when maintenance is managed by using a calendar function irrespective of an actual using state of the fryer [[1]] 30, management based on the using state of the fryer [[1]] 30 can be performed. Hereinafter, although a description of each modified example will be given, basic operating procedures for the operating panel 16 itself are similar to those in the above embodiment except that the settings at the execution time in a maintenance time setting mode are different. A brief description will be given with reference to the corresponding flow chart.

For example, FIG. 6 shows an example when a maintenance schedule is managed according to a (cooking time) operation time of the pulse burner [[4]] 34). At the step S1, the pulse burner [[4]] 34 starts combustion, and cooking is started. At the step S3, the end of cooking is checked. At the step S4, the timer is stopped, and the cooking time is integrated. When it is judged at the step S5 that the integrated cooking time reaches a preset standard time (for example, 500 hours) or more, the information displaying the asterisk * is performed at the step S6. Therefore, in the maintenance time setting mode, a maintenance item managed in accordance with the cooking time is selected, and the standard time to be informed may be set.

FIG. 7 shows an example when a maintenance schedule is managed according to the cooking count (the number of operating the pulse burner [[4]] 34). At the step 1, the pulse burner [[4]] 34 starts combustion, and cooking is started. At the step S2, 1 is added to a memory of the controller 5 every cooking. At the step S3, if the integrated cooking count reaches a preset standard count (for example, 500 counts) or more, the information displaying the asterisk * is performed at the step S4. Therefore, in the maintenance time setting mode, a maintenance item managed in accordance with the cooking count is selected, and the standard count to be informed may be set.

As has been described above, in the above modified example, a maintenance execution time is informed according to an actual using state of the fryer [[1]] 30, thus enabling more proper maintenance according to the using state. Of course, in the above modified example as well, the cooking time or cooking count can be arbitrarily reset for each maintenance item. In addition, maintenance work corresponding to the contents of the information is performed, thereby making it possible to automatically call off the information, and automatically update the contents of the next information after call off the information."